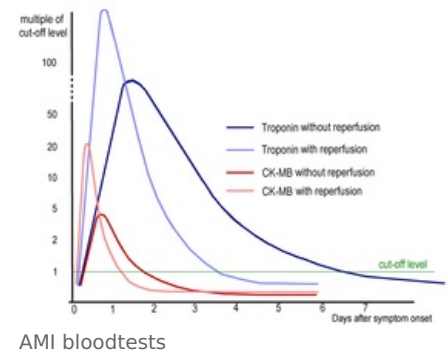# Recommended examination procedure in case of suspected acute myocardial infarction

For the diagnosis of acute coronary syndrome , repeated determination of two laboratory indicators - *rapid* and *definitive* - is recommended.

In *the early phase* after the onset of acute coronary syndrome, myoglobin has the highest diagnostic sensitivity - *a "quick indicator"*

AMI bloodtests

- It is an early but non-specific marker that will differentiate between patients without acute myocardial infarction and patients with a probable diagnosis of acute myocardial infarction due to chest pain and missing or unclear ECG findings .
- In the case of myoglobin, a negative (unincreased) level is evaluated, which eliminates an acute myocardial infarction.
- The final diagnosis of AIM must be confirmed by a second marker.

Troponins are *a definitive indicator* of myocardial damage.

- They allow very sensitive and specific detection of myocardial necrosis - *even microscopic* .

The advantages of troponin determination in the diagnosis of AIM are several:

- high specificity for the myocardium;
- almost undetectable levels in healthy individuals;
- multiple concentrations in acute myocardial infarction;
- high sensitivity allows to detect even minimal myocardial damage;
- longer persistence of elevated values may also be useful for late diagnosis of MI;
- the only parameter that can be determined in a hemolytic sample.

Elevated levels of cardiac troponins reflect myocardial damage, which, in addition to AIM, can be caused by other causes such as inflammation (myocarditis), pulmonary embolism or cardiac surgery.

The determination of CK-MB mass is acceptable only in a situation where troponin testing is not available.

- In addition, CK, CK-MB and / or CK-MB mass are determined to assess the size of the ischemic lesion.

Recommended time schedule for blood sampling for the determination of cardiac markers in suspected acute myocardial infarction

Pointer	Subscription			
	at the time of patient admission	4 hours after admission	8 hours after admission	12 hours after admission
Early (myoglobin)	Yes	Yes	(Yes)	-
Definitive (cardiac troponin T or I)	Yes	Yes	Yes	Yes

Links

External links

- Acute coronary syndrome I. - interactive algorithm + test
- Acute coronary syndrome II. - interactive algorithm + test

related articles

- Biochemical examinations in acute myocardial infarction
- Heart-attack

Reference

1. ↑ Panteghini M .: Recommendations on use of biochemical markers in acute coronary syndrome: IFCC proposals. eJIFCC 13, 2.